UTAH GEOLOGICAL AND MINERAL SURVEY
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY

Published and sold by
UTAH GEOLOGICAL AND MINERAL SURVEY
Genevieve Atwood, Director
606 Black Hawk Way
Salt Lake City, Utah 84108

Plate 1
Utah Geological and Mineral Survey Map 94
Geologic Map of the Pigeon Mountain Quadrangle

Base from U.S. Geological Survey, Pigeon Mountain quadrangle 1967

Mapping by authors in 1984-85
Kent D. Brown, Cartographer

SCALE 1:24 000

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1967 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

UTAH
QUADRANGLE LOCATION

GEOLOGIC MAP OF THE PIGEON MOUNTAIN QUADRANGLE BOX ELDER COUNTY, UTAH

by
Linda L. Glick and David M. Miller
U.S. Geological Survey

1987

UTAH GEOLOGICAL AND MINERAL SURVEY
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY

Plate 2
Utah Geological and Mineral Survey Map 94
Geologic Map of the Pigeon Mountain Quadrangle

CONTACT

Dotted where covered

HIGH-ANGLE FAULT

Dashed where approximately located; dotted where covered;
Bar and ball on downthrown side; dip indicated

LOW-ANGLE FAULT

Dashed where approximately located;
dotted where covered; sawteeth on upper plate

STRIKE AND DIP OF BEDDING

50

TRACE OF LAKE BONNEVILLE SHORELINE

P — Provo - About 4835 ft (1474m) elevation

S — Stansbury - About 4510 ft (1375m) elevation

LOCATION OF PALEONTOLOGICAL SAMPLE

DESCRIPTION OF MAP UNITS

Qaf — Alluvial fan deposits—*Unconsolidated fan deposits of gravel, sand, and silt; colluvium included locally.*

Qla — Lacustrine and alluvial deposits, undivided—*Alluvium older than Lake Bonneville etched by erosional shorelines, and thin lacustrine gravel and sand deposits. Includes fine-grained deltaic deposits overlain by marl and alluvial deposits in northwest part of quadrangle; locally includes white marl in recesses of Pigeon Mountain. Includes thicker lacustrine deposits south of Pigeon Mountain.*

Qal_1 — Younger alluvium—*Unconsolidated silt, sand, and fine pebble gravel in ephemeral streams and washes. Locally includes floodplain deposits.*

Qes — Eolian sand—*Unconsolidated tan to light-brown, fine- to medium-grained sand and tan silt, occurring as complexes of small (2 m high) dunes or broad sheets covering fine-grained lacustrine and alluvial deposits. Commonly contains detrital evaporite minerals. Most small dune complexes are vegetated.*

Qai — Alluvial silt—*Unconsolidated deposits of tan silt, clay, and fine-grained sand, generally flat-lying but locally forming eolian mounds less than one meter high. Desiccation features, vegetation, and black algae are common.*

Qpm — Playa mud—*Unconsolidated clay, silt, and white soluble salts in nearly level, undrained, vegetation-free basins.*

Qar — Desert ripples—*Light-colored silt ponded behind dark-colored, vegetated sand and silt ridges that form a ripple pattern. Typically occur near the intersections of distal alluvial fans and fine-grained alluvium deposited on the ancient lake bottom.*

Qal_2 — Older alluvium—*Unconsolidated silt, sand, and fine pebble gravel in abandoned streams and washes; also represents sheetwash deposits.*

Qag — Alluvial gravel—*Narrow, sinuous deposits of fine to coarse pebble gravel containing approximately 10 to 40 percent silt matrix, and deposited by stream channels discordant with present drainage systems. Deposits form dark-colored, pebble-strewn ridges.*

- Qags — Alluvial gravel in deposits that typically trend south—*Maximum clast size is about 5 cm diameter.*
- Qage — Alluvial gravel in deposits that typically trend east—*Maximum clast size is about 3 cm diameter.*

Qds — Deltaic sand—*Tan to brown, poorly size-sorted, medium-grained sand containing abundant sand-sized evaporite minerals and coarse igneous fragments. Forms cuspate ridges and platforms.*

Qlg — Lacustrine gravel and sand, undivided-*Unconsolidated gravel and sand forming shoreline deposits of Lake Bonneville. Clasts are well rounded and size-sorted. Locally includes beachrock cemented by calcareous silt. Includes underlying marl deposits in places on Pigeon Mountain.*

Qms — Mass movement deposits—*Landslide mass producing hummocky topography on the east side of Pigeon Mountain.*

Tru — Unnamed sandstone—*Yellowish-brown calcareous siltstone and fine-grained sandstone forming slopes. Thick beds of medium-gray limestone, typically containing chert and crinoidal debris, form ledges in upper half of unit.*

Pm — Murdock Mountain Formation—*Brown, black, and white, thin-bedded chert, brown sandstone, and gray dolomite and dolomitic sandstone, typically with prominent pink to red hue. Chert locally contains as much as 50 percent carbonate as pods and layers.*

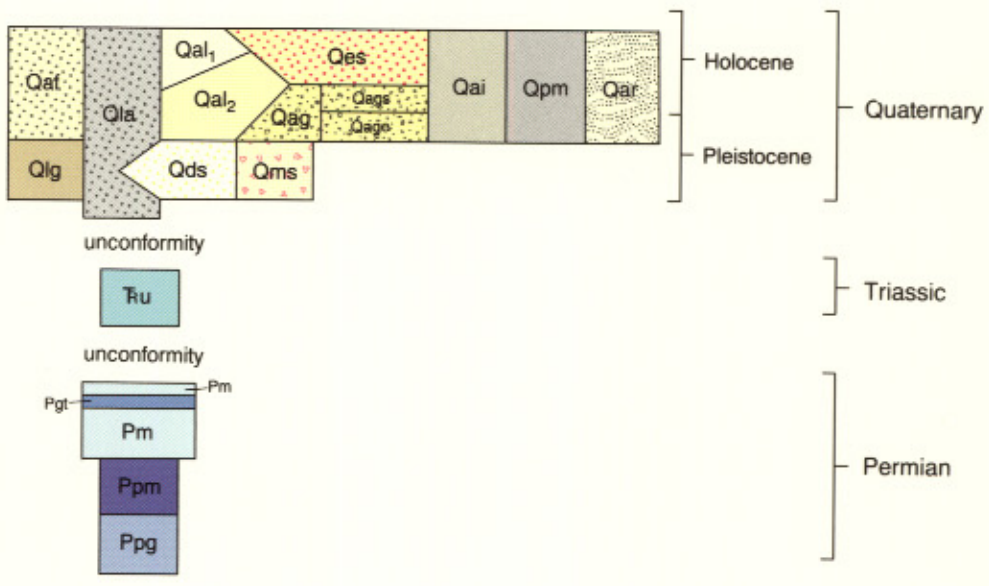
Pgt — Tongue of Gerster Limestone—*Thick-bedded, gray, shelly limestone with abundant brachiopods that are in places silicified.*

Ppm — Meade Peak Phosphatic Shale Tongue of the Phosphoria Formation—*Black and brown, fissile shale and siltstone with subordinate interbedded dolomite and sandstone.*

Ppg — Grandeur Formation of the Park City Group—*Gray and brownish-gray, medium- to thick-bedded, cherty dolomite with thin interbeds of laminated sandstone and bedded chert; rare limestone.*

FORMATION	SYMBOL	THICKNESS feet (meters)	LITHOLOGY
Unnamed sandstone	Tru	300 (90)	
Gerster Limestone Tongue	Pgt	10 (3)	
Murdock Mountain Formation	Pm	600 (180)	
Meade Peak Phosphatic Shale Tongue	Ppm	180 (55)	
Grandeur Formation	Ppg	2200 (670)	

CORRELATION OF MAP UNITS



Ptc — Trapper Creek Formation—*Thick beds of bioclastic limestone alternating with thin beds of limestone and dolomite (shown only on cross section).*

Pbg — Badger Gulch Formation—*Black, platy, silty limestone with bioclastic beds (shown only on cross section.)*